

SECOND DRAFT REPORT

HISTORICAL REVIEW OF
CHANGES IN THE OPERATING EXPENSES FOR
RENT STABILIZED UNITS IN THE CITY OF BERKELEY

Prepared For:

Berkeley Rent Stabilization Board

Prepared By:

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Urban Economist

April 27, 1994

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Table 10.1

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Table 10.2

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Table 10.3

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SUMMARY

This historical review of the changes in operating expenses between 1979 and 1991 provides a factual basis for discussions on how the Annual General Adjustment (AGA) process has affected renters and landlords. The two appendix volumes contain the ordinances, regulations, rate scheduals, etc. affecting the twenty-eight differenct categories of operating expenses, and the methodologies and assumptions used in estimating the operating expenses for each of these categories.

This information allows the Board to provide quanatative answers many questions that have been asked of the Board over the years. Four major findings of this report are:

1. Between 1979 and 1991, operating expenses increased at a rate about 50 percent greater than the rate of inflation. (See Figure S-1 and Table S-1)
2. Between 1979 and 1991, the median rent increase^d by \$13.00 more than the increase in operating expenses for the median individually-metered unit, and by at least \$7.00 less than the increase in operating expenses for the median master-metered unit. (See Figure S-2 and Table S-2)
3. Between 1979 and 1991, the cummulative increase in rent received by the landlord was \$348.00 less than cummulative increased amount spent on operating expenses for the median individually-metered unit.
4. If the Searle adjustment process (with the NOI indexed) had been put in place in 1979, for the median unt, the landlords would have received an additional \$9,995 per unit in rent between 1979 and 1991. Put another way, renters saved \$9,995 in rent between 1979 and 1991 because the NOI was not indexed for inflation.

CITY OF BERKELEY
RENT STABILIZED UNITS
1979 - 1991

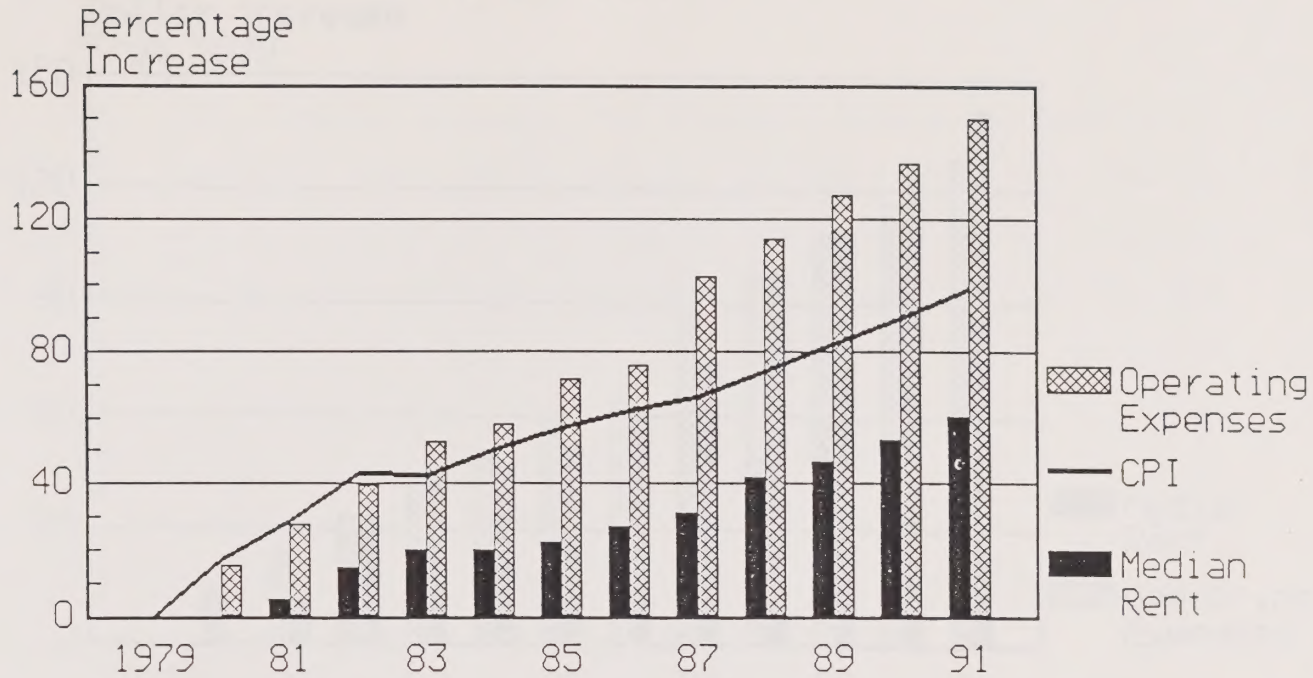


FIGURE S-1: Summary 1979 - 1991

TABLE S-1: Summary of CPI, Operating Expenses, and Median Rent, 1979 - 1991

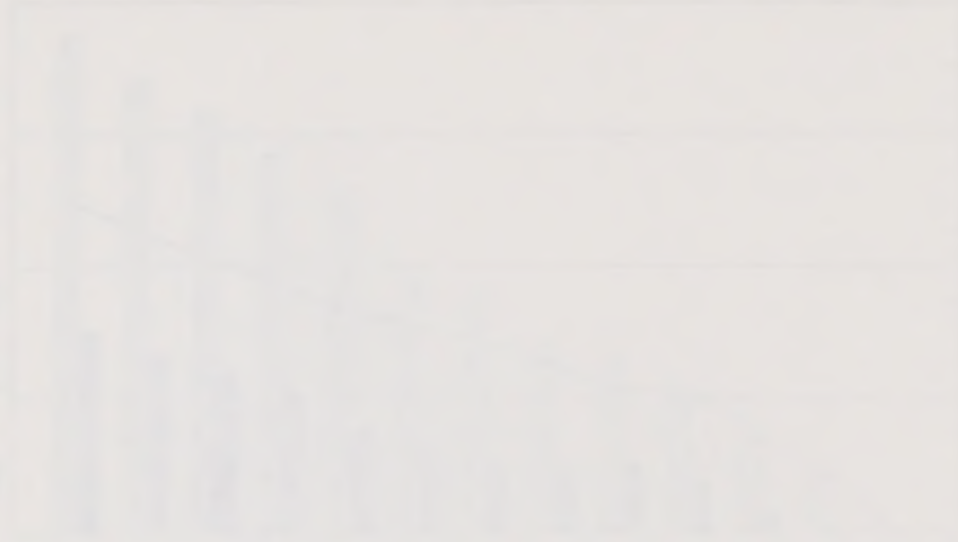
Year	CPI	Operating Expenses	Median Rent
1979	69.1	\$85.42	\$233.70
1980	80.7	\$98.54	\$233.70
1981	89.1	\$109.23	\$245.38
1982	99.1	\$119.16	\$267.47
1983	98.6	\$130.16	\$280.17
1984	103.7	\$134.73	\$280.17
1985	108.4	\$146.49	\$285.77
1986	111.9	\$150.32	\$296.84
1987	115.0	\$173.05	\$307.23
1988	120.1	\$182.70	\$332.23
1989	126.2	\$194.08	\$342.20
1990	131.6	\$202.01	\$358.20
1991	137.6	\$213.65	\$375.20

SOURCE: Glen Elder, Urban Economist

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14/03/2018



The following table shows the results of the analysis. The first column shows the time of day, the second column shows the value of the variable, and the third column shows the standard deviation. The data shows a clear downward trend over time, with the value of the variable decreasing from approximately 100 at time 0 to approximately 20 at time 10.

Time	Value	Standard Deviation
0	100	10
1	95	10
2	90	10
3	85	10
4	80	10
5	75	10
6	70	10
7	65	10
8	60	10
9	55	10
10	50	10

Source: Data from the analysis.

CITY OF BERKELEY
RENT STABILIZED UNITS
1979 - 1991

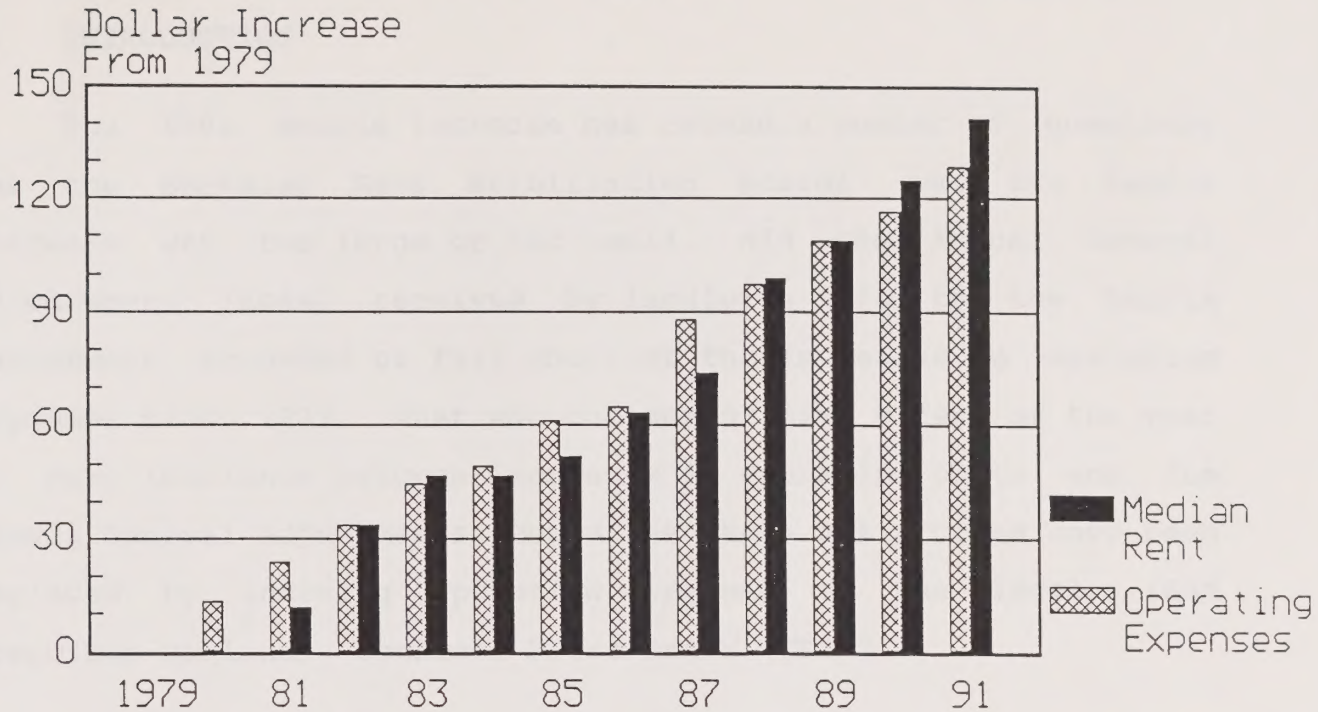


FIGURE S-2: Dollar Summary 1979 - 1991

TABLE S-2: Summary of Dollar Increases in Operating Expenses and Median Rent, 1979 - 1991

Year	Operating Expense	Increase in Operating Expense	Median Rent	Increase in Median Rent
1979	\$85.42		\$233.70	
1980	\$98.54	\$13.12	\$233.70	\$.00
1981	\$109.23	\$23.81	\$245.38	\$11.68
1982	\$119.16	\$33.74	\$267.47	\$33.77
1983	\$130.16	\$44.74	\$280.17	\$46.47
1984	\$134.73	\$49.31	\$280.17	\$46.47
1985	\$146.49	\$61.07	\$285.77	\$52.07
1986	\$150.32	\$64.90	\$296.84	\$63.14
1987	\$173.05	\$87.63	\$307.23	\$73.53
1988	\$182.70	\$97.28	\$332.23	\$98.53
1989	\$194.08	\$108.66	\$342.20	\$108.50
1990	\$202.01	\$116.59	\$358.20	\$124.50
1991	\$213.65	\$128.23	\$375.20	\$141.50

SOURCE: Glen Elder, Urban Economist

CITY OF BIRMINGHAM BUDGETED EXPENSES 1991 - 1994



FIGURE 1-1: BUDGETED EXPENSES 1991 - 1994

TABLE 1-1: Summary of Budgeted Expenses by Department
Fiscal Year 1991 - 1994

Department	1991	1992	1993	1994
Police	35.00	34.00	33.00	32.00
Fire	25.00	24.00	23.00	22.00
Public Works	15.00	14.00	13.00	12.00
Health	10.00	9.00	8.00	7.00
Education	12.00	11.00	10.00	9.00
Library	5.00	4.50	4.00	3.50
Recreation	3.00	2.50	2.00	1.50
Other	5.00	4.50	4.00	3.50
Total	115.00	110.00	105.00	100.00

BIRMINGHAM CITY DEPARTMENT OF FINANCE

I. INTRODUCTION

The 1991 Searle increase has raised a number of questions for the Berkeley Rent Stabilization Board; was the Searle increase too large or too small, did the Annual General Adjustments (AGAs) received by landlords prior to the Searle adjustment exceeded or fall short of the increases in operating expenses since 1979, what was the cumulative effect of the year by year imbalance between increases in operating costs and the Annual General Adjustments, could the whole AGA process have been replaced by indexing operating expenses to the local, (San Francisco-Oakland), Consumer Price Index (CPI)?

Prior efforts, conducted separately by Glen Elder and by Stephen Barton, have attempted to answer these and other questions using the data contained in past AGA study reports.

However, the operating expense data contained in prior AGA studies could not be simply combined to produce a cumulative summary. In part, this was due to refinements and changes made in the methodologies used to estimate operating expenses. Other problems occurred because some expense estimates had, over time, been significantly affected by "drift" (i.e., rounding errors). In addition, in several of the earlier AGA studies certain operating expenses had been omitted, double counted, or distorted due to typographical errors.

A major portion of addressing these problems was the development of this historical review's two Appendix volumes containing the source documentation for each expense category. These consist of ordinances, resolutions and rate schedules along with the dates changes in operating expenses went into effect.

The methodology was then standardized to allow the calculation of operating expenses since 1979 in a uniform manner. Standardization of the methodologies was facilitated by data that was not available to in earlier AGA reports (e.g., square footage, water consumption, and electrical consumption) could be used in place of various earlier estimates. While reviewing the methodologies and data sources, problems were discovered in six of the methodologies used in the 1994 AGA report. Three of the problems are technical in nature and easily corrected.

Seven questions are addressed in this report based on operating expenses as estimated under the new standardized methodologies.

1. Did the operating expenses increase at a rate greater than the rate of inflation between 1979 and 1991?
2. Did the median rent increase at a rate greater than the rate of inflation between 1979 and 1991?
3. Between 1979 and 1991, did the dollar increase in the median rent keep pace with the dollar increase in operating expenses?

4. Between 1979 and 1991, did the cumulative increase in the median rent keep pace with the cumulative increase in operating expenses?
5. If the Searle adjustment process had been put in place at the beginning of rent stabilization, in 1979, how much additional rent would the tenant have paid?
6. Some operating expenses changed more than once a year (e.g., natural gas and electricity). What would have been the effect of taking these multiple changes into account when producing the AGAs rather than using a single date, July 1st, in the AGA studies?
7. How did the Net Operating Income (NOI) change between 1979 and 1991 as a percentage of rent? What was the percentage in 1992 and 1993 after the Searle adjustment?

It is hoped that the information in this historical review will aid in providing answers to future questions asked of the Board.

II. OPERATING EXPENSES

Table II-1 presents dollar estimates for 28 categories of operating expenses. The dollar amounts are current dollars, there has been no attempt to adjust the amounts for inflation. Table II-2 presents the Median Rent, Operating Cost for the Median Unit in an Individually-Metered Building, the CPI index for each year from 1979 through to 1991, and the percentage increase between 1979 and 1991.

1. From 1979 through to 1991, the consumer price index (CPI) increased by 99 percent, and operating expenses increase by 150 percent. Based on this data, operating expenses increased at a rate 50 percent greater than the rate of inflation.

If the operating expenses were indexed to the consumer price index, by 1991 the amount received by the landlord would have fallen short of covering the increase in monthly operating expenses by \$43.28 per month.

2. From 1979 through to 1991, the median rent increased by 61 percent and the consumer price index (CPI) increased by 99 percent. Based on this data, the median rent increased at a rate 30 percent below the rate of inflation.

3. From 1979 through to 1991, operating expenses for individually-metered units increased by \$128.23 and the median

TABLE II-1: Monthly Operating Expense Summary Table, 1979 - 1991

OPERATING EXPENSES	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Building Inspection	\$.25	\$.35	\$.35	\$.35	\$.35	\$.35	\$.35	\$.35	\$.35	\$.35	\$.03	\$.03	\$.03
Water Service	\$2.75	\$3.12	\$3.12	\$3.12	\$3.12	\$3.74	\$3.85	\$4.06	\$4.31	\$4.59	\$5.84	\$5.17	\$5.50
Wastewater Treatment	\$1.60	\$1.83	\$1.97	\$2.01	\$2.16	\$2.16	\$2.49	\$2.73	\$2.73	\$3.31	\$3.23	\$3.33	\$3.57
Sewer Service	\$1.17	\$1.17	\$3.00	\$3.00	\$3.89	\$4.35	\$3.82	\$4.78	\$12.04	\$12.86	\$12.86	\$13.16	\$13.81
City Business License	\$1.47	\$1.47	\$1.55	\$1.69	\$1.77	\$2.12	\$2.42	\$2.77	\$3.32	\$3.59	\$3.70	\$3.87	\$4.06
Measure Y	\$.85	\$.86											
Library Relief			\$1.92	\$2.05	\$2.19	\$2.31	\$2.44	\$2.55	\$2.62	\$2.72	\$6.00	\$6.34	\$6.34
Refuse Collection	\$4.22	\$4.22	\$5.08	\$5.08	\$7.63	\$7.63	\$9.35	\$9.35	\$12.55	\$11.64	\$11.64	\$12.22	\$13.20
Property Taxes	\$20.52	\$20.93	\$21.35	\$21.17	\$21.36	\$21.84	\$22.10	\$22.19	\$22.27	\$22.45	\$22.70	\$22.96	\$23.10
Insurance	\$10.84	\$11.54	\$13.40	\$14.74	\$17.15	\$17.87	\$18.88	\$19.92	\$20.70	\$21.59	\$22.24	\$22.65	\$23.20
Management	\$18.16	\$21.21	\$23.41	\$26.04	\$25.91	\$27.25	\$28.49	\$29.41	\$30.22	\$31.56	\$33.16	\$34.58	\$36.16
Maintenance	\$16.44	\$19.20	\$21.20	\$23.57	\$23.46	\$24.67	\$25.79	\$26.62	\$27.36	\$28.57	\$30.02	\$31.31	\$32.73
Utility Tax						\$.39	\$.83	\$.77	\$.78	\$1.03	\$1.11	\$1.18	\$1.46
Street Lighting					\$1.14	\$.96	\$.58	\$.80	\$1.23	\$.97	\$1.00	\$1.00	\$1.00
Landscaping and Parks					\$2.73	\$2.92	\$3.32	\$3.51	\$4.38	\$5.45	\$5.18	\$5.51	\$5.51
Rent Board Registration		\$1.00	\$1.00	\$2.50	\$2.50	\$2.50	\$5.00	\$5.00	\$6.67	\$6.67	\$8.33	\$8.33	\$11.33
School Measure H									\$5.83	\$5.83	\$6.13	\$6.42	\$6.65
Fire Inspection				\$.52	\$.52	\$.52	\$.52	\$.64	\$.64	\$.64	\$.69	\$.69	\$.90
Mosquito Abatement					\$.12	\$.09	\$.07	\$.01	\$.01	\$.02	\$.02	\$.02	\$.01
Vector Control							\$.26	\$.22	\$.22	\$.27	\$.28	\$.30	\$.32
Paramedical Care							\$.75	\$.75	\$.74	\$.78	\$.78	\$2.83	\$2.83
Wet Weather Facilities										\$2.00	\$2.00	\$2.00	\$2.48
Clean Storm Water													
Lead Abatement													
Special Fire Assessment													
Regional Trails													
Gas - Individually-Metered	\$4.09	\$6.29	\$6.44	\$6.64	\$8.41	\$6.51	\$6.69	\$5.95	\$6.03	\$6.72	\$7.18	\$7.61	\$7.87
Electricity - I.M.	\$3.06	\$5.34	\$5.45	\$6.68	\$5.75	\$6.56	\$8.49	\$7.96	\$8.07	\$9.09	\$9.97	\$10.50	\$11.59
TOTAL OPERATING COST - I.M.	\$85.42	\$98.54	\$109.23	\$119.16	\$130.16	\$134.73	\$146.49	\$150.32	\$173.05	\$182.70	\$194.08	\$202.01	\$213.65
Increase in Operating Cost		\$13.12	\$10.70	\$9.92	\$11.00	\$4.57	\$11.76	\$3.84	\$22.73	\$9.65	\$11.39	\$7.93	\$11.64
Percentage Increase In Operating Cost		15.36%	10.86%	9.09%	9.23%	3.51%	8.72%	2.62%	15.12%	5.57%	6.23%	4.08%	5.76%
O.C. Increase as a Percent of Rent		5.61%	4.58%	4.04%	4.11%	1.63%	4.20%	1.34%	7.66%	3.14%	3.43%	2.32%	3.25%
Increase in Rent		\$.00	\$11.68	\$22.09	\$12.70	\$.00	\$5.60	\$11.07	\$10.39	\$25.00	\$9.97	\$16.00	\$17.00
Percentage Increase in Rent		.00%	5.00%	9.00%	4.75%	.00%	2.00%	3.87%	3.50%	8.14%	3.00%	4.68%	4.75%
O.C. Increase Exceeds Rent Increase		\$13.12	(\$.98)	(\$12.17)	(\$1.70)	\$4.57	\$6.16	(\$7.23)	\$12.34	(\$15.35)	\$1.42	(\$8.07)	(\$5.36)
Cummulative Difference in Excess Amount			\$12.14	(\$.03)	(\$1.73)	\$2.84	\$9.00	\$1.77	\$14.11	(\$1.24)	\$.18	(\$7.89)	(\$13.25)
Annual Amount of Cummulative Difference		\$157.44	\$145.68	(\$.36)	(\$20.76)	\$34.08	\$108.00	\$21.24	\$169.32	(\$14.88)	\$2.16	(\$94.68)	(\$159.00)
Median Rent	\$233.70	\$233.70	\$245.38	\$267.47	\$280.17	\$280.17	\$285.77	\$296.84	\$307.23	\$332.23	\$342.20	\$358.20	\$375.20
Operating Cost as a Percent of Median Rent	36.55%	42.16%	44.52%	44.55%	46.46%	48.09%	51.26%	50.64%	56.33%	54.99%	56.72%	56.40%	56.94%

SOURCE: Glen Elder, Urban Economist

Table II-2: Percentage Increase, 1979 - 1991

Percentage Increase in Median Rent, Operating Cost and CPI, 1979 - 1991			
<u>Year</u>	<u>Median Rent</u>	<u>Operating Cost</u>	<u>CPI</u>
1979	\$233.70	\$85.42	69.1
1980	\$233.70	\$98.54	80.7
1981	\$245.38	\$109.23	89.1
1982	\$267.47	\$119.16	99.1
1983	\$280.17	\$130.16	98.6
1984	\$280.17	\$134.73	103.7
1985	\$285.77	\$146.49	108.4
1986	\$296.84	\$150.32	111.9
1987	\$307.23	\$173.05	115.0
1988	\$332.23	\$182.70	120.1
1989	\$342.20	\$194.08	126.2
1990	\$358.20	\$202.01	131.6
1991	\$375.20	\$213.65	137.6
Percentage Increase 1979 - 1991	60.55%	150.12%	99.13%

SOURCES: Glen Elder, Urban Economist; Bureau of Labor Statistics

rent increased by \$141.50. Therefore, the AGA increases have exceeded the increases in operating expenses by \$13.27.

However, for the master-metered unit, the increases in operating expenses have exceeded the AGA rent increases by at least \$7.00. Whether the overall operating expenses have exceeded the AGA increase would depend on the relative numbers of individually-metered and master-metered units.

4. For most of the earlier years, the increases in operating expenses exceeded the increase in the median rent. When looked at on a year by year basis, the total amount spent on increased operating expenses for the median unit in an individually-metered building exceeded the revenues from the increased median rent by \$348.24 over the 13 year period between 1979 and 1991, an average of \$2.23 per month.

THE UNIVERSITY OF CHICAGO
1961-1962

The following is a list of the names of the students who have been admitted to the University of Chicago for the year 1961-1962.

The names of the students who have been admitted to the University of Chicago for the year 1961-1962 are listed below. The names are listed in alphabetical order by last name.

The names of the students who have been admitted to the University of Chicago for the year 1961-1962 are listed below. The names are listed in alphabetical order by last name.

III. THE SEARLE ADJUSTMENT

If the Searle adjustment procedure, which includes an adjustment for Net Operating Income (NOI) had been in place in 1979, total revenues received by a landlord of a median priced rental unit would have been \$9,995.64 greater during the 1979 through 1991 time period. Put another way, the renter of the median unit saved \$9,995 in rent between 1979 and 1991 because the NOI was not indexed for inflation.

The median rent, the estimated median rent with the Searle Adjustment process in place in 1979, and the annual amounts of additional rent that would have been received with the Searle adjustment in place, are presented in Table III-1. This table assumes that the Searle adjusted rent levels were at or below the available market rate, and do not reflect any increase in other operating expenses, such as increased business license fees.

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JANUARY 10, 1968
REPORT
OF THE
COMMISSIONER OF THE
INTERNAL SECURITY
DIVISION
TO THE
JOINT SELECT COMMITTEE
ON ASSASSINATIONS
AND
ATTENTATS
ON THE
INTERNAL SECURITY
DIVISION
OF THE
FEDERAL BUREAU OF
INVESTIGATION
AND
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DEPARTMENT OF JUSTICE

THE
INTERNAL SECURITY
DIVISION
OF THE
FEDERAL BUREAU OF
INVESTIGATION
AND
THE
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DEPARTMENT OF JUSTICE
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DIVISION
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Table III-1: Estimate of Past Median Rents Under Searle

Comparison of the Median Rent to What the Median Rent Would Have Been Under the Searle Adjustment Process			
<u>Year</u>	<u>AGA Median Rent</u>	<u>Searle Median Rent</u>	<u>Yearly Deficit</u>
1979	\$233.70	\$233.70	\$0.00
1980	\$233.70	\$266.58	\$394.56
1981	\$245.38	\$287.25	\$502.44
1982	\$267.47	\$311.96	\$533.88
1983	\$280.17	\$327.57	\$568.80
1984	\$280.17	\$341.02	\$730.20
1985	\$285.77	\$359.39	\$883.44
1986	\$296.84	\$366.49	\$835.80
1987	\$307.23	\$393.23	\$1,032.00
1988	\$332.23	\$413.22	\$971.88
1989	\$342.20	\$437.88	\$1,148.16
1990	\$358.20	\$454.96	\$1,161.12
1991	\$375.20	\$477.98	\$1,233.36
Sum of Yearly Difference, 1979 - 1991			\$9,995.64

SOURCE: Glen Elder, Urban Economist

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Year	Month	Day	Time
1944	1	1	10:00
1944	1	2	10:00
1944	1	3	10:00
1944	1	4	10:00
1944	1	5	10:00
1944	1	6	10:00
1944	1	7	10:00
1944	1	8	10:00
1944	1	9	10:00
1944	1	10	10:00
1944	1	11	10:00
1944	1	12	10:00
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1944	1	15	10:00
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1944	1	25	10:00
1944	1	26	10:00
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IV. MULTIPLE CHANGES IN OPERATING EXPENSES

A number of operating expenses have had several rate changes during a year. Because the current methodology uses the rate on a single date, usually July 1st, this may result in a serious over or under estimation of operating expenses. Data was gathered for the two operating expense categories that had the greatest number of rate changes within the course of a year. These are electrical costs and natural gas costs. The data is presented in Tables IV-1, IV-2, IV-3, and IV-4.

The data shows that in any one year, the difference between the estimated expense and the actual expense can vary by several hundred percent. However, cummulatively, the difference is less than 1% for natural gas, and less than 0.1% for electricity. (See Tables IV-3 and IV-4.) In addition, the difference is much less during periods of low inflation.

Given that the cummulative difference is so small, and that the current period is one of relatively low inflation, it is recommended that the current practice of using a single date be maintained.

TABLE IV-1: Annual Electrical Costs,
July 1st Rate Verses Actual Rates,
Individually-Metered Buildings, 6 Units

Year	Based On Rates Effective July 1st.	Based On Actual Rates	Dollar Difference	Percentage Difference
1979	\$220.30	\$224.52	\$4.22	1.92%
1980	\$384.65	\$332.47	(\$52.18)	-13.57%
1981	\$392.23	\$393.20	\$.97	.25%
1982	\$480.84	\$514.44	\$33.60	6.99%
1983	\$412.95	\$425.48	\$12.53	3.03%
1984	\$472.67	\$503.02	\$30.35	6.42%
1985	\$611.59	\$590.28	(\$21.31)	-3.48%
1986	\$573.10	\$583.44	\$10.34	1.80%
1987	\$580.77	\$577.49	(\$3.28)	-.56%
1988	\$654.78	\$646.86	(\$7.92)	-1.21%
1989	\$717.49	\$717.85	\$.36	.05%
1990	\$756.19	\$760.89	\$4.70	.62%
1991	\$834.21	\$837.73	\$3.52	.42%
1992	\$835.55	\$840.24	\$4.69	.56%
Total	\$7,707.02	\$7,723.39	\$16.37	.21%
Monthly Total Difference, Per Rental Unit				\$.23

SOURCES: Glen Elder, Pacific Gas & Electric Company

TABLE IV-2: Annual Increase In Electrical Costs,
July 1st Rate Verses Actual Rates,
Individually-Metered Buildings, 6 Units

Time Period	Based On Rates Effective July 1st.	Based On Actual Rates	Dollar Difference	Percentage Difference
1979-80	\$164.35	\$107.95	(\$56.40)	-34.32%
1980-81	\$7.58	\$60.73	\$53.15	701.19%
1981-82	\$88.61	\$121.24	\$32.63	36.82%
1982-83	(\$67.89)	(\$88.96)	(\$21.07)	31.04%
1983-84	\$59.72	\$77.54	\$17.82	29.84%
1984-85	\$138.92	\$87.26	(\$51.66)	-37.19%
1985-86	(\$38.49)	(\$6.84)	\$31.65	-82.23%
1986-87	\$7.67	(\$5.95)	(\$13.62)	-177.57%
1987-88	\$74.01	\$69.37	(\$4.64)	-6.27%
1988-89	\$62.71	\$70.99	\$8.28	13.20%
1989-90	\$38.70	\$43.04	\$4.34	11.21%
1990-91	\$78.02	\$76.84	(\$1.18)	-1.51%
1991-92	\$1.34	\$2.51	\$1.17	87.31%
Total	\$615.25	\$615.72	\$.47	.08%

SOURCES: Glen Elder, Pacific Gas & Electric Company

TABLE 1-1: Annual Statistical Summary
 This table shows the annual statistical summary of the project, including the number of people, the number of projects, and the number of projects completed.

Year	Number of People	Number of Projects	Number of Projects Completed
1990	100	10	5
1991	120	12	6
1992	140	14	7
1993	160	16	8
1994	180	18	9
1995	200	20	10
1996	220	22	11
1997	240	24	12
1998	260	26	13
1999	280	28	14
2000	300	30	15
2001	320	32	16
2002	340	34	17
2003	360	36	18
2004	380	38	19
2005	400	40	20
2006	420	42	21
2007	440	44	22
2008	460	46	23
2009	480	48	24
2010	500	50	25
2011	520	52	26
2012	540	54	27
2013	560	56	28
2014	580	58	29
2015	600	60	30
2016	620	62	31
2017	640	64	32
2018	660	66	33
2019	680	68	34
2020	700	70	35
2021	720	72	36
2022	740	74	37
2023	760	76	38
2024	780	78	39
2025	800	80	40

Source: Data from the project database, 1990-2025.

TABLE 1-2: Annual Statistical Summary
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1990	100	10	5
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1993	160	16	8
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1996	220	22	11
1997	240	24	12
1998	260	26	13
1999	280	28	14
2000	300	30	15
2001	320	32	16
2002	340	34	17
2003	360	36	18
2004	380	38	19
2005	400	40	20
2006	420	42	21
2007	440	44	22
2008	460	46	23
2009	480	48	24
2010	500	50	25
2011	520	52	26
2012	540	54	27
2013	560	56	28
2014	580	58	29
2015	600	60	30
2016	620	62	31
2017	640	64	32
2018	660	66	33
2019	680	68	34
2020	700	70	35
2021	720	72	36
2022	740	74	37
2023	760	76	38
2024	780	78	39
2025	800	80	40

Source: Data from the project database, 1990-2025.

TABLE IV-3: Annual Natural Gas Costs,
July 1st Rate Verses Actual Rates,
Individually-Metered Buildings, 6 Units

Year	Based On Rates Effective July 1st.	Based On Actual Daily Rates	Dollar Difference	Percentage Difference
1979	\$268.18	\$268.18	\$.00	.00%
1980	\$394.79	\$353.80	(\$40.99)	-10.38%
1981	\$404.52	\$398.37	(\$6.15)	-1.52%
1982	\$414.92	\$414.98	\$.06	.01%
1983	\$518.97	\$494.09	(\$24.88)	-4.79%
1984	\$413.31	\$452.32	\$39.01	9.44%
1985	\$465.33	\$463.90	(\$1.43)	-.31%
1986	\$424.62	\$419.61	(\$5.01)	-1.18%
1987	\$432.71	\$432.72	\$.01	.00%
1988	\$483.73	\$456.33	(\$27.40)	-5.66%
1989	\$488.06	\$480.33	(\$7.73)	-1.58%
1990	\$477.73	\$486.31	\$8.58	1.80%
1991	\$487.82	\$488.93	\$1.11	.23%
1992	\$498.28	\$500.19	\$1.91	.38%
Total	\$6,172.97	\$6,110.06	(\$62.91)	-1.02%
Monthly Total Difference, Per Rental Unit				(\$.87)

SOURCES: Glen Elder, Pacific Gas & Electric Company

TABLE IV-4: Annual Increase In Natural Gas Costs,
July 1st Rate Verses Actual Rates,
Individually-Metered Buildings, 6 Units

Time Period	Based On Rates Effective July 1st.	Based On Actual Rates	Dollar Difference	Percentage Difference
1979-80	\$126.61	\$85.62	(\$40.99)	-32.38%
1980-81	\$9.73	\$44.57	\$34.84	358.07%
1981-82	\$10.40	\$16.61	\$6.21	59.71%
1982-83	\$104.05	\$79.11	(\$24.94)	-23.97%
1983-84	(\$105.66)	(\$41.77)	\$63.89	-60.47%
1984-85	\$52.02	\$11.58	(\$40.44)	-77.74%
1985-86	(\$40.71)	(\$44.29)	(\$3.58)	8.79%
1986-87	\$8.09	\$13.11	\$5.02	62.05%
1987-88	\$51.02	\$23.61	(\$27.41)	-53.72%
1988-89	\$4.33	\$24.00	\$19.67	454.27%
1989-90	(\$10.33)	\$5.98	\$16.31	-157.89%
1990-91	\$10.09	\$2.62	(\$7.47)	-74.03%
1991-92	\$10.46	\$11.26	\$.80	7.65%
Total	\$230.10	\$232.01	\$1.91	.83%

SOURCES: Glen Elder, Pacific Gas & Electric Company

V. NET OPERATING INCOME (NOI)

Data on the Net Operating Income (NOI) is presented in Table V-1. The NOI was calculated by subtracting the operating expense from the median rent. The Net Operating Income (NOI) was about 63 percent of the rent in 1980. This fell to about 43 percent in 1991. After the Searle increase, in 1993 the NOI rose to about 56 percent of income.

Since the NOI was essentially held constant between 1979 and 1991 while the AGAs allowed the rent to increase the pattern of a falling percentage is expected. If the AGAs had exactly covered the increases in operating expenses between 1979 and 1991, the NOI would have remained steady at \$148.28 per month.

IN SENATE
JANUARY 10, 1911

REPORT OF THE COMMISSIONERS OF THE LAND OFFICE
IN RESPONSE TO A RESOLUTION PASSED BY THE SENATE
JANUARY 10, 1911
ALBANY: J.B. LIPPINCOTT COMPANY, PRINTERS
1911

THE LAND OFFICE HAS THE HONOR TO ACKNOWLEDGE THE RECEIPT OF
A RESOLUTION PASSED BY THE SENATE JANUARY 10, 1911,
RELATIVE TO THE REPORT OF THE COMMISSIONERS OF THE LAND OFFICE
IN RESPONSE TO A RESOLUTION PASSED BY THE SENATE
JANUARY 10, 1911.

Table V-1: Net Operating Income as a Percent of Rent

<u>Year</u>	<u>AGA Median Rent</u>	<u>Net Operating Income</u>	<u>Percent of Rent</u>
1979	\$233.70	\$148.28	63 %
1980	\$233.70	\$135.16	58 %
1981	\$245.38	\$136.15	55 %
1982	\$267.47	\$148.31	55 %
1983	\$280.17	\$150.01	54 %
1984	\$280.17	\$145.44	52 %
1985	\$285.77	\$139.28	49 %
1986	\$296.84	\$146.52	49 %
1987	\$307.23	\$134.18	44 %
1988	\$332.23	\$149.53	45 %
1989	\$342.20	\$148.12	43 %
1990	\$358.20	\$156.19	43 %
1991	\$375.20	\$161.55	42 %
1992	\$502.90	\$280.85	56 %
1993	\$522.90	\$291.33	56 %

SOURCE: Glen Elder, Urban Economist

Table 4-17. Line Operating Income as a Percent of Sales

Year	Operating Income as a Percent of Sales	Year	Operating Income as a Percent of Sales
1957	12.7%	1960	12.7%
1958	12.7%	1961	12.7%
1959	12.7%	1962	12.7%
1960	12.7%	1963	12.7%
1961	12.7%	1964	12.7%
1962	12.7%	1965	12.7%
1963	12.7%	1966	12.7%
1964	12.7%	1967	12.7%
1965	12.7%	1968	12.7%
1966	12.7%	1969	12.7%
1967	12.7%	1970	12.7%
1968	12.7%	1971	12.7%
1969	12.7%	1972	12.7%
1970	12.7%	1973	12.7%
1971	12.7%	1974	12.7%
1972	12.7%	1975	12.7%
1973	12.7%	1976	12.7%
1974	12.7%	1977	12.7%
1975	12.7%	1978	12.7%
1976	12.7%	1979	12.7%
1977	12.7%	1980	12.7%
1978	12.7%	1981	12.7%
1979	12.7%	1982	12.7%
1980	12.7%	1983	12.7%
1981	12.7%	1984	12.7%
1982	12.7%	1985	12.7%
1983	12.7%	1986	12.7%
1984	12.7%	1987	12.7%
1985	12.7%	1988	12.7%
1986	12.7%	1989	12.7%
1987	12.7%	1990	12.7%
1988	12.7%	1991	12.7%
1989	12.7%	1992	12.7%
1990	12.7%	1993	12.7%
1991	12.7%	1994	12.7%
1992	12.7%	1995	12.7%
1993	12.7%	1996	12.7%
1994	12.7%	1997	12.7%
1995	12.7%	1998	12.7%
1996	12.7%	1999	12.7%
1997	12.7%	2000	12.7%
1998	12.7%	2001	12.7%
1999	12.7%	2002	12.7%
2000	12.7%	2003	12.7%
2001	12.7%	2004	12.7%
2002	12.7%	2005	12.7%
2003	12.7%	2006	12.7%
2004	12.7%	2007	12.7%
2005	12.7%	2008	12.7%
2006	12.7%	2009	12.7%
2007	12.7%	2010	12.7%
2008	12.7%	2011	12.7%
2009	12.7%	2012	12.7%
2010	12.7%	2013	12.7%
2011	12.7%	2014	12.7%
2012	12.7%	2015	12.7%
2013	12.7%	2016	12.7%
2014	12.7%	2017	12.7%
2015	12.7%	2018	12.7%
2016	12.7%	2019	12.7%
2017	12.7%	2020	12.7%
2018	12.7%	2021	12.7%
2019	12.7%	2022	12.7%
2020	12.7%	2023	12.7%
2021	12.7%	2024	12.7%
2022	12.7%	2025	12.7%
2023	12.7%	2026	12.7%
2024	12.7%	2027	12.7%
2025	12.7%	2028	12.7%
2026	12.7%	2029	12.7%
2027	12.7%	2030	12.7%
2028	12.7%	2031	12.7%
2029	12.7%	2032	12.7%
2030	12.7%	2033	12.7%
2031	12.7%	2034	12.7%
2032	12.7%	2035	12.7%
2033	12.7%	2036	12.7%
2034	12.7%	2037	12.7%
2035	12.7%	2038	12.7%
2036	12.7%	2039	12.7%
2037	12.7%	2040	12.7%
2038	12.7%	2041	12.7%
2039	12.7%	2042	12.7%
2040	12.7%	2043	12.7%
2041	12.7%	2044	12.7%
2042	12.7%	2045	12.7%
2043	12.7%	2046	12.7%
2044	12.7%	2047	12.7%
2045	12.7%	2048	12.7%
2046	12.7%	2049	12.7%
2047	12.7%	2050	12.7%
2048	12.7%	2051	12.7%
2049	12.7%	2052	12.7%
2050	12.7%	2053	12.7%
2051	12.7%	2054	12.7%
2052	12.7%	2055	12.7%
2053	12.7%	2056	12.7%
2054	12.7%	2057	12.7%
2055	12.7%	2058	12.7%
2056	12.7%	2059	12.7%
2057	12.7%	2060	12.7%
2058	12.7%	2061	12.7%
2059	12.7%	2062	12.7%
2060	12.7%	2063	12.7%
2061	12.7%	2064	12.7%
2062	12.7%	2065	12.7%
2063	12.7%	2066	12.7%
2064	12.7%	2067	12.7%
2065	12.7%	2068	12.7%
2066	12.7%	2069	12.7%
2067	12.7%	2070	12.7%
2068	12.7%	2071	12.7%
2069	12.7%	2072	12.7%
2070	12.7%	2073	12.7%
2071	12.7%	2074	12.7%
2072	12.7%	2075	12.7%
2073	12.7%	2076	12.7%
2074	12.7%	2077	12.7%
2075	12.7%	2078	12.7%
2076	12.7%	2079	12.7%
2077	12.7%	2080	12.7%
2078	12.7%	2081	12.7%
2079	12.7%	2082	12.7%
2080	12.7%	2083	12.7%
2081	12.7%	2084	12.7%
2082	12.7%	2085	12.7%
2083	12.7%	2086	12.7%
2084	12.7%	2087	12.7%
2085	12.7%	2088	12.7%
2086	12.7%	2089	12.7%
2087	12.7%	2090	12.7%
2088	12.7%	2091	12.7%
2089	12.7%	2092	12.7%
2090	12.7%	2093	12.7%
2091	12.7%	2094	12.7%
2092	12.7%	2095	12.7%
2093	12.7%	2096	12.7%
2094	12.7%	2097	12.7%
2095	12.7%	2098	12.7%
2096	12.7%	2099	12.7%
2097	12.7%	2100	12.7%

Source: U.S. Department of Commerce, Bureau of Economic Analysis

VI. EXAMINATION OF METHODOLOGIES

During the process of standardization and review, problems were discovered in the current methodologies used for six categories of operating expenses.

The methodologies used for three categories of operating expenses; Natural Gas, Electricity, and Property Tax, had technical errors and resulted in an overestimation of the increase in operating expenses. These problems are easily corrected with a change in the calculation procedures.

1. Natural Gas

The reports have assumed that about 85 percent of the gas cost is charged at the baseline rate, the 15 percent at rates above baseline. However, because all the natural gas for the common area would pass through one meter, only about 50 percent of the gas cost is charged at the baseline rate. Therefore, the change in the over-baseline rate becomes much more important than the baseline rate. Because the baseline rate has increased more rapidly than the over-baseline rate, this has tended to overstate the increase in natural gas costs.

2. Electricity

Same problem as Natural Gas concerning the amount of electricity consumed at the baseline rate.

3. Property Tax

The Property Tax methodology has ignored that the bonded indebtedness has fallen since 1980. The actual property tax rate had fallen by about ten percent between 1979 and 1993.

1. Introduction

The purpose of this study is to investigate the effects of the various factors which influence the rate of growth of the human body.

The study was conducted in a laboratory setting, and the results are presented in the following sections. The first section describes the methods used in the study, and the second section presents the results of the study.

2. Methods

The study was conducted in a laboratory setting, and the results are presented in the following sections. The first section describes the methods used in the study, and the second section presents the results of the study.

3. Results

The results of the study are presented in the following sections. The first section describes the methods used in the study, and the second section presents the results of the study.

4. Discussion

The results of the study are presented in the following sections. The first section describes the methods used in the study, and the second section presents the results of the study.

Operating expenses for three categories; Insurance, Management, and Water Service, are likely to have been underestimated. To address the problems within these categories would require gathering new data, most likely through a comprehensive survey.

4. Insurance

Insurance costs are usually based on a cost per dollar of coverage. Housing prices / construction costs have increased at a much higher rate in California than nationwide, plus stricter building codes have increased the cost of replacing a rental unit. These features are not taken into account in the current methodology.

5. Maintenance

Maintenance costs do not address California's recent increase in Workman's Compensation Coverage. This aspect is not taken into account in the current methodology.

6. Water Service

Water Service ignores the elevation charge. The current methodology assumes that none of the units pay an elevation charge.

As a side note, varying estimates of the 1980 median rent of \$230, \$233, \$250, and \$300, resulted in an overestimation the increase in operating expenses in earlier AGA studies.

1971-72

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VII. OPERATING EXPENSES, 1992 - 1993

Using the same uniformed, standard methodology, operating expenses have been calculated for the years 1992 and 1993 by each expense category. These are presented in Table VII-1. These calculations assume that the full Searle increase was taken in 1992.

Data is presented in Table VII-1 for the years 1981 - 1993 so that trends in operating expenses may be easily visualized. However, because the 1992 and 1993 median rent increases include the Searle Adjustment for NOI, certain numbers, such as the amount that the operating cost increase exceeds the rent increase, will no longer be comparable with earlier years.

It is interesting to note that the AGA studies started with thirteen operating expense categories in 1979, which expanded to twenty-six categories in 1993, through new taxes, fees, and assessments, with a twenty-seventh category, the Regional Trails Assessments, to be added in 1994.

100

100

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TABLE VII-1: Monthly Operating Expense Summary Table, 1981 - 1993

OPERATING EXPENSES	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Building Inspection	\$.35	\$.35	\$.35	\$.35	\$.35	\$.35	\$.35	\$.35	\$.03	\$.03	\$.03	\$.03	\$.03
Water Service	\$3.12	\$3.12	\$3.12	\$3.74	\$3.85	\$4.06	\$4.31	\$4.59	\$5.84	\$5.17	\$5.50	\$6.91	\$7.26
Wastewater Treatment	\$1.97	\$2.01	\$2.16	\$2.16	\$2.49	\$2.73	\$2.73	\$3.31	\$3.23	\$3.33	\$3.57	\$3.85	\$4.08
Sewer Service	\$3.00	\$3.00	\$3.89	\$4.35	\$3.82	\$4.78	\$12.04	\$12.86	\$12.86	\$13.16	\$13.81	\$13.81	\$15.19
City Business License	\$1.55	\$1.69	\$1.77	\$2.12	\$2.42	\$2.77	\$3.32	\$3.59	\$3.70	\$3.87	\$4.06	\$5.44	\$5.65
Measure Y													
Library Relief	\$1.92	\$2.05	\$2.19	\$2.31	\$2.44	\$2.55	\$2.62	\$2.72	\$6.00	\$6.34	\$6.34	\$6.78	\$6.78
Refuse Collection	\$5.08	\$5.08	\$7.63	\$7.63	\$9.35	\$9.35	\$12.55	\$11.64	\$11.64	\$12.22	\$13.20	\$13.20	\$14.02
Property Taxes	\$21.35	\$21.17	\$21.36	\$21.84	\$22.10	\$22.19	\$22.27	\$22.45	\$22.70	\$22.96	\$23.10	\$23.53	\$24.60
Insurance	\$13.40	\$14.74	\$17.15	\$17.87	\$18.88	\$19.92	\$20.70	\$21.59	\$22.24	\$22.65	\$23.20	\$23.78	\$24.55
Management	\$23.41	\$26.04	\$25.91	\$27.25	\$28.49	\$29.41	\$30.22	\$31.56	\$33.16	\$34.58	\$36.16	\$37.29	\$38.39
Maintenance	\$21.20	\$23.57	\$23.46	\$24.67	\$25.79	\$26.62	\$27.36	\$28.57	\$30.02	\$31.31	\$32.73	\$33.76	\$34.76
Utility Tax			\$.00	\$.39	\$.83	\$.77	\$.78	\$1.03	\$1.11	\$1.18	\$1.46	\$1.48	\$1.48
Street Lighting			\$1.14	\$.96	\$.58	\$.80	\$1.23	\$.97	\$1.00	\$1.00	\$1.00	\$1.00	\$.90
Landscaping and Parks			\$2.73	\$2.92	\$3.32	\$3.51	\$4.38	\$5.45	\$5.18	\$5.51	\$5.51	\$5.78	\$6.03
Rent Board Registration	\$1.00	\$2.50	\$2.50	\$2.50	\$5.00	\$5.00	\$6.67	\$6.67	\$8.33	\$8.33	\$11.33	\$10.42	\$10.42
School Measure H							\$5.83	\$5.83	\$6.13	\$6.42	\$6.65	\$6.98	\$7.17
Fire Inspection		\$.52	\$.52	\$.52	\$.52	\$.64	\$.64	\$.64	\$.69	\$.69	\$.90	\$.90	\$.90
Mosquito Abatement			\$.12	\$.09	\$.07	\$.01	\$.01	\$.02	\$.02	\$.02	\$.01	\$.03	\$.12
Vector Control					\$.26	\$.22	\$.22	\$.27	\$.28	\$.30	\$.32	\$.33	\$.33
Paramedical Care					\$.75	\$.75	\$.74	\$.78	\$.78	\$2.83	\$2.83	\$3.00	\$4.15
Wet Weather Facilities								\$2.00	\$2.00	\$2.00	\$2.48	\$2.48	\$2.48
Clean Storm Water												\$1.54	\$1.54
Lead Abatement													\$.83
Special Fire Assessment													\$.17
Regional Trails													
Gas - Individually-Metered	\$6.44	\$6.64	\$8.41	\$6.51	\$6.69	\$5.95	\$6.03	\$6.72	\$7.18	\$7.61	\$7.87	\$8.14	\$7.68
Electricity - I.M.	\$5.45	\$6.68	\$5.75	\$6.56	\$8.49	\$7.96	\$8.07	\$9.09	\$9.97	\$10.50	\$11.59	\$11.60	\$12.05
TOTAL OPERATING COST - I.M.	\$109.23	\$119.16	\$130.16	\$134.73	\$146.49	\$150.32	\$173.05	\$182.70	\$194.08	\$202.01	\$213.65	\$222.05	\$231.57
Increase in Operating Cost	\$7.97	\$9.92	\$11.00	\$4.57	\$11.76	\$3.84	\$22.73	\$9.65	\$11.39	\$7.93	\$11.64	\$8.41	\$9.51
Percentage Increase in Operat	7.870%	9.09%	9.23%	3.51%	8.72%	2.62%	15.12%	5.57%	6.23%	4.08%	5.76%	3.93%	4.28%
O.C. Increase as a Percent of	.0341	4.04%	4.11%	1.63%	4.20%	1.34%	7.66%	3.14%	3.43%	2.32%	3.25%	2.24%	1.89%
Increase in Rent			\$12.70	\$.00	\$5.60	\$11.07	\$10.39	\$25.00	\$9.97	\$16.00	\$17.00	\$127.70	\$20.00
Percentage Increase in Rent			4.75%	.00%	2.00%	3.87%	3.50%	8.14%	3.00%	4.68%	4.75%	34.04%	3.98%
O.C. Increase Exceeds Rent Increase		\$9.92	(\$1.70)	\$4.57	\$6.16	(\$7.23)	\$12.34	(\$15.35)	\$1.42	(\$8.07)	(\$5.36)	(\$119.29)	(\$10.49)
Cummulative Difference in Excess Amount			\$8.22	\$12.79	\$18.95	\$11.72	\$24.06	\$8.71	\$10.13	\$2.06	(\$3.30)	(\$122.59)	(\$133.08)
Annual Amount of Cummulative Difference		\$119.04	\$98.64	\$153.48	\$227.40	\$140.64	\$288.72	\$104.52	\$121.56	\$24.72	(\$39.60)	(\$1,471.08)	(\$1,596.96)
Median Rent	\$245.38	\$267.47	\$280.17	\$280.17	\$285.77	\$296.84	\$307.23	\$332.23	\$342.20	\$358.20	\$375.20	\$502.90	\$522.90
Operating Cost as a Percent of Median Rent	44.52%	44.55%	46.46%	48.09%	51.26%	50.64%	56.33%	54.99%	56.72%	56.40%	56.94%	44.15%	44.28%

SOURCE: Glen Elder, Urban Economist

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